

ELSBERG, (L.)

With the compliments of DR. ELSBERG.

INTRODUCTORY ADDRESS

DELIVERED BEFORE THE

MEDICAL CLASS

OF

DARTMOUTH COLLEGE,

AUGUST 1ST, 1883

BY

LOUIS ELSBERG, A. M. M. D.,

PROFESSOR OF LARYNGOLOGY.



17. 1. 1900.

LECTURE,

INTRODUCTORY TO THE EIGHTY-SEVENTH COURSE
OF INSTRUCTION IN THE

MEDICAL DEPARTMENT

OF

DARTMOUTH COLLEGE,

DELIVERED AUGUST 1, 1883,

BY

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LOUIS ELSBERG, A. M., M. D.,

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PUBLISHED BY THE CLASS.

1883.

Dartmouth Medical College,

Hanover, N. H., Aug. 4, 1883.

PROF. LOUIS ELSBERG—

Dear Sir:—At a meeting of the medical class, the undersigned were appointed a committee to request a copy of your able and interesting lecture for publication. We beg that you will kindly comply with the desire of the entire class, and assure you of the personal admiration of yours,

Very Respectfully,

S. D. MARDEN,	} <i>Committee.</i>
O. H. ADAMS,	
J. S. MCGREGOR,	

Hanover, N. H., Aug. 4, 1883.

MESSRS. S. D. MARDEN, O. H. ADAMS, J. S. MCGREGOR,

Committee.

Gentlemen:—In compliance with your request, I herewith send you my Introductory Lecture for publication. With best wishes for the welfare and professional success of yourselves and your classmates,

I am, yours truly,

LOUIS ELSBERG.

Dartmouth Press, Hanover, N. H.

INTRODUCTORY LECTURE.

Young gentlemen who constitute the Medical Class for the ensuing year, and ladies and gentlemen who are honoring us with your presence, I bid all of you cordially welcome in the name of the Faculty of Dartmouth Medical College!

Young gentlemen! The study on which you are about to enter is unending. I would say to each one of you: unless you have brought to it the devotion of a lifetime, draw back 'ere you have wasted your time and money and energy. Once commenced, it must be continued until the close of your professional career.

To you, who have well considered the choice of your avocation, who are imbued with the "sacred fire", and have the enthusiasm and perseverance which ensure success and self-satisfaction, whether or not recognized by the world,—I shall offer to-day some preliminary explanations, and my advice as to the best way of pursuing your studies. These, as you are aware, are concerned with man, comprehending every human being under every possible mundane condition.

As an object of your study, man is an existence in space and in time: His existence in space is called body, his existence in time is called function. The science of the body is Anatomy, the science of function Physiology: hence, all knowledge of man, relating to body and function, can be arranged under the heads of Anatomy and Physiology, employing these terms in their widest sense.

The human body has been likened to a stately mansion built of beautiful but very perishable materials, all of which need continual repair to keep up the form and usefulness of the structure. After death, "when the owner has left the edifice," repair ceases, and these materials, one by one, melt away and crumble into dust.

Let me tell you a curious fact as to the time it takes until decomposition of these materials is completed. You may remember that Shakespeare makes Hamlet ask the grave-digger (in the play, Act V., Scene 1.)

"How long will a man lie i' the earth ere he rot?"

to which the clown answers :

"Faith, if he be not rotten before he die, (as we have many pocky corses now-a-days, that will scarce hold the laying in,) he will last you some eight year or nine year; a tanner will last you nine year."

"Why he more than another?"

"Why, sir, his hide is so tanned with his trade, that he will keep out water a great while; and your water is a sore decayer of your dead body."

Shakespeare's information, wonderfully correct as it is in many medical, as in almost all other matters, in this case is not reliable; for although under exceptional circumstances a body may be preserved for years, it has been found that as a rule it takes only three months and a half for decomposition to be completed; so long and no longer, ordinarily, does flesh remain flesh, and tissue, tissue. But this destruction does not commence with death; it is inseparable from life. The very appearance of corporal identity which the living organism presents is but an illusion; for every day, every hour, every moment its parts are wearing away; and the curious fact is, that in about three months and a half a quantity of nitrogen is removed by excretion or vital decay equal to that contained in the whole bulk of the chief nitrogenous tissue; that is to say, therefore, living flesh and dead flesh last just the same time.

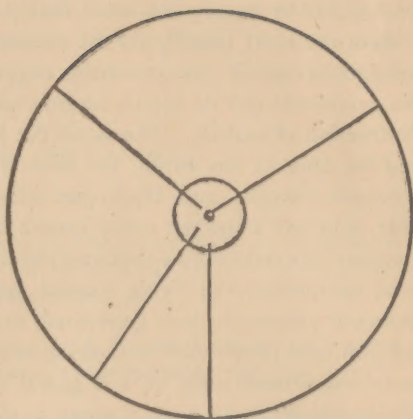
Decomposition is more truly a part of life than it is of death; for whereas it gradually ceases after death and ends its work with the reconversion of the organic particles into eternally unaltering elements, it continues unstayed throughout the whole of life. But whereas in death it involves the fading of a long loved image, the tearing up of a fair garment, the ruin of a darling home, the forcible divorce from our nearest and dearest, the very thought of which "makes us to shudder and grow sick at heart",—during life it is associated with the fruition of all that is joyous in existence, the bounding pulse, the swelling chest, every use of mind and muscle: Aye, the most truly living body is the

most active in decay ; the more bodily and mental vigor are displayed, the more quickly do the various tissues melt down into substances which the excreting organs without delay remove. No movement can be made, no function performed without the destruction of matter. The more the blacksmith works his arms and the thinker his brain, the heavier is the bulk of Carbon, Nitrogen, Oxygen and Hydrogen which is thrown out by lungs, liver, skin and kidneys ; every breath I draw, every word I utter, involves this destructive metamorphosis of material. Every particle, composing the living animal body, has but a momentary transient existence ; ever generated, ever changed, ever annihilated and ever renewed, it is nothing in itself, and owes its ephemeral importance only to the grand and glorious processes of life in which for the time it plays a rôle. Justly, therefore, say philosophers as well as poets—" Life is action, inaction death"—" Use, use is life ; and he most truly lives who uses best."

The state of life in which every part of the body fulfills its intended and required object is the state which is called *health*. Is it possible to accurately define what the object of every part of the body is? It is clear that this object is not the same in every healthy individual, nor in the same individual in different healthy conditions ; for, from the child we must not expect what only the adult can do, nor from the female what requires the constitution of the male, nor from sleep what is accorded but to the waking state. At the very best, by observation and comparison of a great number of healthy men of different age, sex, climate, etc., we can form only an idea of a healthy man varying according to age, sex, climate, etc., and such an idea constitutes a type. A man not corresponding to his particular type of health is called sick. Sickness or disease is therefore, an alteration of, a difference from, or deviation from, the type. Recovery is a return to the type. But, as the type of health for any man can be determined, not with mathematical accuracy, but only with statistical probability or approximation, a certain latitude is allowed as the latitude of health.

I think I can make clear to you some of the general principles concerning health and disease (which in my opinion underlie all scientific medical study and practice) by reference to a little sketch.

If we draw a circle, the centre of which is to represent the highest possible state of life, the type of health, and the periphery death,—then, [a small concentric] circle would bound the latitude of health, and the space between the two circles would represent disease.



In the change from life to death—whether it come with the rapidity of lightning stroke or cannon ball, or from the most lingering malady—the aberration or deviation from the type is complete, and you see in our sketch, every radius leads from health, through disease to death.

Now let us analyze a little closer what constitutes “disease”. In description and discussion, it is convenient to speak of disease as an entity, as a something distinct from, or added to, a person. We speak of a man’s catching, having, or being afflicted by, such and such a disease. We say of one disease it is malignant, of another it is unyielding, of another it is mild, etc., but at the present day not only medical men but all intelligent lay people know perfectly well that what is so designated has really no personal or ontological character, but is a condition. It is a condition of life altered from that of health. The metamorphosis of tissue that goes on unceasingly during life is constructive as well as destructive, i. e. the breaking down is accompanied by building up: The organism being the theater of all manifestations of life is at the same time also the means of preservation of these manifestations; and though in its material constitution lies the possibility of its becoming diseased, some disturbing influence is required for that possibility to become realized. Such a disturbing influence is called morbidic—literally sick-making—cause. A morbidic cause is of necessity present in every case of disease. Disease has therefore been defined to be “a deviation from the normal state or action of the organism under the dis-

turbing influences of morbid causes". This is the fundamental proposition of all pathology or knowledge of disease ; and in this respect the positive progress of our science enables us to stand to-day on a firmer platform than that of our forefathers.

Fully to understand what constitutes disease, you must follow me a little further.

On examining the individual functions of the organism, we cannot fail to be impressed with the harmony existing between them and with their interdependence. I have already explained to you that it is impossible to set up an absolute standard of health, but it is obvious that each function has its relative conditions and consequences. For instance, though we cannot determine what should be in any particular individual before us, the exact frequency and force of the heart's contraction, we recognize its relations to the task of sending venous blood to the lungs, that this must correspond to the necessities of aëration of the blood, that this involves appropriate breathing, etc., etc. Now, if in the individual before us, there should be a disturbance of the condition or conditions necessary for the performance of any particular function, that function would necessarily become disordered ; and in so far as this function itself is a requisite condition for the performance of one or more other functions, and these again of others, the continuing disorder of the first function would involve other and finally all functions. But, the living organism is under many circumstances effectively self-regulating ; when disordered it always has a tendency to return to its normal condition, this return being accomplished by compensatory action of some part or function ; therefore whenever a function is disturbed, one of two things happens, viz : either the consequent change of other functions is of such a nature as to compensate for the disorder of the first function, by which means the involvement of still other or all functions is prevented, or else such a compensation, and thereby the prevention of further and further involvement, does not take place and then the disturbance gradually but certainly affects the entire organism.

In the first case, the disturbance is and remains local and more or less completely disappears with the disappearance of its cause, i. e. with the disappearance of the primary change of the condition for the functional activity.

In the second case, the disturbance continues and, in increasing progression, involves other functions. This steadily progressing process constitutes "disease".

With each newly affected function, the possibility of preventing further involvement diminishes, although this possibility may not in any case be entirely absent while life remains. On this possibility or probability—which becomes less and less the more the disease progresses,—depends the possibility or probability of interrupting the progressive involvement and of the recovery or cure of the patient without or with more or less permanent disablement. With the involvement of the last function death occurs.

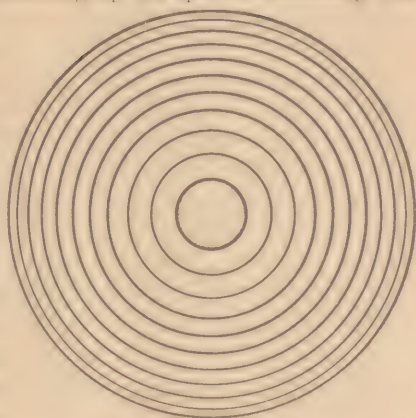
From this analysis you see that every disease is in its origin a "local disturbance", and every death a most "general disease"; that what we call disease is what lies between local disturbance and death; and, that local disturbances are the "component elements" that make up disease. Transition from disease to health can take place only by reconversion of disease into local disturbance, though not, of course, necessarily the precise local disturbance from which the particular disease originated; before health can be re-established in a person suffering from complex local disturbances or disease, there must occur a retrograde progression from a larger number and greater degree of local disturbances to a smaller number and lesser degree.

Dr. Chambers of London calls disease "a partial death." As life implies continual renewal of the body, he calls the most active possible renewal, health; the complete cessation of renewal death; and the partial cessation, or arrest, disease. He says "In death the flesh goes on being decomposed, as during life, but not being renewed, the form is lost entirely. In disease, while decomposition goes on, renewal flags, and the decomposing tissues are not sufficiently pushed out by new-formed substance; they are retained as part of the imperfect body, a sort of death in life, and are rightly termed by the pathologist "degenerate". Disease, therefore is a partial death."

The more firmly to impress my analysis upon your minds, allow me for a moment to recur to our circle. The small circle which we made the boundary line of the latitude of health represents "local disturbance" and an indefinite number of

enlarging concentric circles, filling up the space illustrating disease, represent the consequent disturbances of bodily parts and functions which progressing disease involves, even unto death!

Now, as to the Causation and treatment of Disease: As to the causation, we have arrived at such a state of advancement, that the time seems at hand when most diseases can be said to be



produced by human means and avertible by human skill and prudence. Certain diseases can now be called into existence at pleasure: Thus, by injecting a few drops of alcohol into the portal vein, we can give an animal diabetes; by puncturing a portion of the medulla oblongata, albuminuria; or by pinching the vagus, palpitation of the heart. And not only these symptoms but also textural changes of disease, can we produce; thus by directly acting on the pneumogastric nerve, we can cause not only cough, dyspnoea and increased bronchial secretion, but also the anatomical lesions of pneumonia and pleurisy. By exciting the solar plexus, we can bring on diarrhoea and dysentery, together with the structural ravages that habitually accompany them. Nor is this all; while with the aid of a drop or two of lactic acid we can cause rheumatism and heart disease or with a little decomposing animal matter fever and death,—we can also artificially produce many surgical diseases, from cataract in the eye to stone in the bladder!

Understanding better the causation of diseases, we can better carry out the indications for their removal. The branch of medicine specially concerned with the study and annihilation of the causes of disease has, during the last twenty years, found many ardent investigators. The name “*nosophthory*”—literally, the science of eradicating disease—has been given to it, and it bids fair to attain the rank of honor among the medical sciences.

We also possess to-day in our *Materia Medica* an almost miraculous power. "Whoever could have believed that the story of a *dead heart* could be else than a stage fiction? Yet, strange as it appears, it is a scientific reality. We have it in our power by means of the two poisons '*upas antiar*' and '*woorari*' to produce the wonderful sight of a dead heart in a living body, as well as that of a dead body with a living heart."

Occasionally, you will meet with men—even in the ranks of our own profession—who will tell you that they do not believe in the power of remedies. Almost always I have found that these are men who began with exaggerated notions of the good effects of drugs, and by injudiciously employing them failed to obtain the expected results, then jumping to the opposite extreme, denied their use altogether; forgetting that their want of success might be due to the insufficiency of their own knowledge rather than to the inefficacy of medicines properly applied.

Medicines enable us to produce at our will almost every conceivable action and counter-action on the human body. I need but refer to the well-known promptitude with which certain substances cause vomiting, others purging, others sweating, and so forth. While on the one hand, with *Belladonna* we can excite the brain to increased action, we can lull it to repose with *Cannabis Indica*. With certain stimulants, we can hasten the rapidity of the bounding pulse, or, we can slacken its speed with *Veratrum Viride*. We can stimulate the motor nerves with *Strychnine* so as to throw all the muscles of the body into fearful tetanic spasms; or, we can paralyse them with *Conia* and render them flaccid as in death. To illustrate the power of the Healing art, I need but ask you to accompany me, with your mental vision, to the bedside of some sick. Not to multiply cases, let us visit a patient in the second paroxysm of a pernicious intermittent. His pulse is beating with great rapidity, his extremities are cold while he complains of intense heat and thirst; his countenance is sunken, anxious and haggard; the hand of death is apparently upon him, though he has one chance of life, for the subsidence of the paroxysm is at hand; but another paroxysm may inevitably prove fatal. A leap into the Falls of Niagara might not be more so. What, then, is to save him? No earthly power can check his headlong descent, ending in the grave, ex-

cept only one, and that the power of a medicine : Let sulphate of quinia be given to him freely, and it will almost certainly rescue him !

I abstain, intentionally, from giving you any example of the surgical, life saving and health restoring, achievements of our profession. These are positive, wonderful, and innumerable, from the prevention of fatal hemorrhage by the tying of an artery to the cure of blindness by a cataract-operation or the snatching from impending death by the removal of a laryngeal polypus !

As to drugs, I might further tell you of cases of bilious remittent fever cut short by ipecac and aconite ; of chronic bronchitis getting well under seneka ; of inveterate and most offensive skin diseases yielding to arsenic ; of specific ulcers healing from iodine ; and many many others, in which medicines relieve acute pain and chronic disease ! I might refer to the varied powers of iron, and opium, and mercury, and the blessings of anæsthesia. But it is needless in this Introductory Lecture : All this knowledge, in detail, and much more, will be taught you in due time by my distinguished Colleagues, the able Professors of Practice and Therapeutics, Professors Frost and Field.

Only, believe me, gentlemen, there are substances in the catalogue of our remedies, which are essential under the present constitution of things to both our comfort and our safety, substances the loss of which would be wholly irreparable for humanity. The most dangerous diseases often have been, and again can be, conducted to a favorable issue under circumstances resulting, in the absence of these medicines, in all human probability, in speedy death.

It is true, medicines are abused ; it is true that not infrequently much harm, sometimes even a fatal effect, can be clearly traced to dosing and overdosing ! Very often, a patient to get well requires only time and a watchful guard against injurious influences ; of the majority of all diseases, the tendencies are toward health, and if no disturbing cause be allowed to interfere, most of them will, sooner or later, terminate in recovery ; but this argues naught against the power or necessity of remedies ; for, though nature, without them, may cure most attacks of disease, yet there are many beyond her unassisted powers, and there are still more in which her efforts may be materially aided and

the amount of the patient's suffering vastly diminished, by judicious medicinal interference. Verily I can say to you, as Shakespeare makes the King declare, in *CYMBELINE*, Act V., Scene 5.

"By medicine life may be prolonged."

So, you need not be at all skeptical as to the power or influence of the medicines at the command of the thoroughly educated physician ; but, on the other hand, you must not run into the opposite extreme ! I feel it my duty to warn you against attaching undue importance to medicines. I have just said that most diseases tend toward health ; I had previously explained that the living organism is often effectively self-regulating ; and now, for the third time, I want to impress upon you the fact, that under the controlling influence of life, physiological *optimism* is the aggregate tendency of all the forces of the body ; that is to say, that nature under all circumstances endeavors to bring about the best attainable result ! It is this that makes wounds heal, inflammations subside, diseases get well ! If it were not for this, the physician would be powerless ; for indeed, the whole of our art but consists in favoring or supplying the conditions, which allow or promote the best action of this "healing power of nature", the "*vis medicatrix nature*."

If, after listening to my Lecture, you carry away with you only this one idea, viz : that, though in many cases the physician may be necessary for assisting nature, yet in all cases it is nature, either assisted or unassisted, that does the curing, I shall feel that I have not talked to you uselessly. (I must, however, be allowed to add in parenthesis that I shall not feel entirely content, as I should like to have you carry away some other ideas, too ; but, if you can remember only one, it is this most important fact that I desire ineffaceably to impress upon you.) Nature cures ; and in all cases the physician should give nature an opportunity to work the cure, *as far as can be*, without the administration of medicines. A drug, —a substance foreign to the human organism —is at best little better than a "necessary evil", and should be introduced into the body only when imperatively demanded to obviate a greater evil. Though he should never hesitate to give a medicine when the occasion demands it, the physician should always refrain, if he can get along without it. By removing morbid causes, correcting bad habits, regulating diet and sur-

rounding circumstances, by proper exercise, occupation, cheerfulness, cleanliness and other hygienic improvements, he does unquestionable good without the possibility of doing harm ; and, when he cannot accomplish his object without drugs, he must choose such, as are not, or as are least, attended with injurious consequences, and in doses, and adequately repeated, to produce the effect intended : avoiding both extremes of excessively large and inertly small quantities !

What is the *modus operandi* of drugs, i. e. how do remedies act on the body in producing their curative effects ? The answers to this question have been so various, and have, from the earliest times, so much depended upon some dominant theory, that happened to reign in pathology and therapeutics, that their study is really a study of the History of Medicine. As the theory changed, the accepted action of the remedy changed ; thus, when the theory of obstruction was in vogue, *deobstruents* were invoked : when the theory of thickening of humors prevailed, these same medicines flourished as *incisives*, *diluents*, and *attenuants* : when diseases were regarded as depending on relaxation and tension of the fibres, these remedies were *relaxants* : and when a special regard was had to excess or deficiency of caloric, they were *refrigerants*. The various modes of classifying remedies according to their supposed action on the body are invested with so much interest, and one can draw from them so striking and impressive a moral for guidance through life, that I am tempted to briefly outline them.

There is a tendency in the human mind to explain every thing ; and, alas, the less a man in reality knows, the more apt is he to apply some one generalization to all the phenomena of the universe ! In medicine, the most prolific source of error has always been the adoption of some one inflexible hypothesis to account alike for the action of all remedial agents ; so many medical men have seized upon and carried to extremes some one principle, entirely true and useful in its legitimate limited application.

About two hundred years ago, the functions of the body, the production of diseases and the operations of medicines were sought to be explained entirely on *mechanical* principles. The action of stimulants, for example, was supposed to depend on the

sharp-pointed, needle-like shape of their particles, that of sedatives on their smooth, globular form, etc. LOCKE wrote (Essay concerning human understanding, 1689, Book IV., Chap. 3.)

"Did we but know the mechanical affections of the particles of rhubarb, hemlock, opium and a man, as a watchmaker does those of a watch (whereby it performs its operations) and of a file (which, by rubbing on them, will alter the figure of any of the wheels,) we should be able to tell beforehand that rhubarb will purge, hemlock kill and opium make a man sleep."

Many attempts have also been made to explain the action of medicines on *chemical* principles. GALEN considered all medicines to be either hot, cold, moist or dry, that there were four degrees of each of these properties, and, as all diseases were supposed to depend on similar qualities, that a hot disease was cured by a cold remedy, a moist disease by a dry remedy, etc. PARACEL-SUS and VAN HELMONT considered the chemical principles of medicines, by virtue of which they operated, to be three in number, viz.: salt, sulphur and mercury. Next, acids and alkalis; then, fermentations and their preventives and finally disinfectants and antiseptics came upon the stage! Diseases being supposed to be caused by chemical agencies in the body, each was neutralized by the appropriate chemical antithet.

Closely allied, in the idea of specific treatment, with the chemical, is the *germ* theory of disease; according to this, diseases are caused by microscopical organic germs or living vegetable or animal parasital growths, which remedies destroy.

All the many discordant explanations of the action of remedies, aside from these three, viz.: the mechanical, the chemical, and the parasitical or "antigermal", may be reduced essentially to the following six:—

- 1st. That according to the Brunonian Doctrine, i. e. Degrees of Stimulation;
- 2ndly. That according to the Doctrine of Contra stimulation;
- 3rdly. That of opposition, or contrary effect;
- 4thly. That of similar effect;
- 5thly. That of elimination; and
- 6thly. That of alterative action.

1. According to the Brunonian Doctrine, which owes its name to that of its founder, the famous Dr. JOHN BROWN, and

which held medical minds captive for a good many years, especially in England and this country, all medicines are stimulants, i. e., "agents causing excitement", differing from each other only in the degree of stimulation. Some produce less excitement than is requisite for health, while some cause more than suits the healthy state; but no medicine can cause depression except by an excessive action, i. e. overexcitement followed by reaction and thus depression. Now, as all diseases were regarded by Brown and his followers to be either sthenic or asthenic, i. e. to arise from either excessive or diminished excitement, sthenic diseases were cured by antisthenic remedies and asthenic disorders by sthenic medicines.

2ndly. RASORI and BORDA modified this doctrine by ascribing to remedies, one of two positive qualities, instead of a variation of the same property. They described two distinct classes of medicines, the one called stimulants, the other contra-stimulants. These were to be used respectively in asthenic and sthenic diseases, as the first exalt and the second depress the vital energies. This hypothesis was called in the early part of the present century "the New Italian Doctrine"; but seems to have prevailed among the Hindoos in very remote times.

3rdly. While both the Brunonians and the Italians admitted the existence of only two kinds of diseased action and curative agents, we now come to consider the more plausible idea that each particular disease or symptom is to be cured by administering a remedy which is capable of producing in the organism a contrary state. HIPPOCRATES has been regarded as the founder of this doctrine, because in his 22nd aphorism (*De Flatibus*, Par. III) he observes that "Diseases which proceed from repletion are cured by evacuation; and those which proceed from evacuation are cured by repletion. So, in all the rest; contraries are the remedies of contraries."

4thly. Although HIPPOCRATES had never, so far as I know, attempted to make the proposition "contraries are the remedies of contraries" an exclusive tenet of medical practice, one to be acted on, and to be acted on alone, in all cases, yet HAHNEMANN seized upon this Hippocratic principle to establish by its antithesis the basis of a would be "reform". "*Similia Similibus Curantur*", "Similar are the remedies of similars" was

his watchword, and became the creed of his disciples. The idea was not a new one, but one calculated to become popular. The fact that under appropriate circumstances an artificial disturbing influence will neutralize or cure a morbid one of the same nature, has from the earliest times been recognized not only by medical men but also by the laity. Allusions to it run through scientific and literary works of every age. On the walls of the ancient baths was the inscription :—

*"Balnea, vina, venus, curruunt corpora sana,
Corpora sana dabunt balnea, vina, venus,"*

"Baths, wine and women destroy the health of man,
Baths, wine and women restore the health of man."

And Shakespeare has this passage in the Second Part of King Henry IV. Act I, Scene 1. :—

"In poison there is physic; and these news,
Had I been well, that would have made me sick,
Being sick, have in some measure made me well;
And as the wretch, whose fever-weakened joints,
Like strengthless hinges, buckle under life,
Impatient of his fit, breaks—like a fire—
Out of his keeper's arms; even so my limbs
Weakened with grief, being now enraged with grief,
Are thrice themselves."

In order to vindicate for the treatment based upon his motto a distinct place as a New and Fundamental Method of Cure differing radically from all others, HAHNEMANN devised the significant name "homoeopathy", (from *ὁμοιος*, like or similar, and *πάθος*, a disease): but the homoeopaths, going in their anxiety and enthusiasm beyond their mark, gave the insignificant, meaningless name of "allopathy" (from *ἄλλος*, another, and *πάθος*, a disease) to the treatment of all who did not embrace their exclusive dogma.

I shall not dwell upon the many illusory devices which the homoeopaths adopted, such as infinitesimal doses, increasing remedial effects by the length of time a powder is rubbed or by the number of shakes given to a mixture, ascribing wonderful efficacy to substances commonly supposed to be inert in doses entirely inappreciable as f. i. one or two decillionth of a grain of charcoal, (a decillionth being a fraction the denominator of which is a unit followed by 60 cyphers), etc., etc. : for I wish only to call

your attention to the formula "Like cures like" as one according to which the action of remedies has been sought to be explained.

5thly. The dogma that disease is cured by elimination or evacuation, the basis of which was the doctrine of humoral pathology which flourished in my early student days, is the next so-called "system" to be considered: Diseases were regarded as Efforts of Nature to throw off some morbid matter, and remedies were supposed by acting on the various organs and secretions to assist nature to evacuate the poison.

6thly. Substitution, conversion, revulsion and alterative action, are the terms by which we denote another step in the explanation of remedial operations. This was the peculiar and prominent feature of the doctrine of BROUSSAIS, some of whose followers survive among the medical practitioners of to-day. The idea being that two morbid impressions cannot exist in the organism at the same time, the medicine is supposed to act by substituting for the disease its own effects on the body, which effects, though morbid in themselves, are less injurious than the disease and call forth, and are more easily overcome by, the self-regulating powers of the organism. Shakespeare alludes to the idea in "Two Gentlemen of Verona" Act II., Scene 4. in describing how when Proteus, Julia's lover, had seen Silvia, the remembrance of his former love is by a newer object quite forgotten :

"Even as one heat another heat expels."

But, gentlemen, all the views that I have briefly sketched for you, are too confined. Though each of them discloses some modicum of truth, they are far too limited to embrace within their scope the whole range of nature. The error of the advocates of each of these systems, or more properly, theories, is, that—biased by the satisfactory observation of the *modus operandi* of particular medicines, and misled by the insufficiency of their knowledge,—they apply the view, which is correct as far as it extends, but which is applicable to a certain number only, to all remedies alike.

The right course to follow, diverges from all these one-sided generalizations ; with a mind ever open to conviction, we must

accept all truths and discard all errors, whencesoever they come. All sound reasoners of the present day hold,—while admitting that some remedies act on mechanical, some others on chemical principles ; that some medicines operate on account of similar, some on account of contrary agency ; that sometimes a disease is relieved by controlling vascular and nervous excitement, sometimes by applying revulsive and alterative measures, sometimes by destroying organic germs and parasitical growths, and sometimes by eliminating some product of organic activity or some material poison,—that these are but a few of many and various ways, all of them tending to the same great end : to counteract the disturbing influence of morbid causes !

I counsel you to beware, from the very beginning of your studies, *and through life*, of all “one idea”-ism, all isms and all pathies ! Exclusive sectarianism, whether in the ordinary everyday occupations, whether in politics, in religion or in medicine, leads not to the true, and not to the good. Evil is its only fruit. In the State, fanning the blaze of unscrupulous party-warfare ; in the Church, instituting persecution for ‘conscience’ sake ; in the Healing Art, sacrificing thousands suffering with remediable ills : it wraps the cloak of self-sufficiency around its hideous nakedness and with charlatan effrontery proclaims aloud : “Within my circle is the truth and there is no truth outside.” I beg you to avoid its narrow platform ! From to-day on, keep ever present before your mind the proper estimate of a Physician. Etymologically, the word implies a student of nature, nature’s scholar. A Physician is a man who, free from the influence of exclusive systems, makes use of every means—medicinal and surgical, physical and psychical—that has been discovered or invented, that is capable of curing the sick or alleviating their suffering. He accepts no unproved theory and rejects no proved remedy from any source. He utilizes for the benefit of his patients ascertained truths, whether derived from scientists or quacks. From the air above and the waters below ; from the artificial chemical laboratories and the bowels of the earth, he draws his weapons. His surgical appliances embrace nearly every material under the sun. Creation yields him its minerals, its herbs and animal substances ; its light, its heat and electricity. The varying seasons and the different climates ; the various occupations

of men and their very thoughts and feelings,—all he employs as his legitimate tools! Accord to no man the name of Physician who bases his medical practice upon any exclusive system: keep yourselves free from everything that would make you deserve to be called, and never allow yourselves to be called, by any sectarian designation. Gentlemen, I beg each one of you to resolve to become no “allopath”, no “homoeopath”, no “hydropath”, no “electropath”, nor any other “ath”; but to resolve to become a physician!

There was a time when a student could more easily master all that was known of medical science and art than at present. This was simply because there was less known. There was a time when a man could at the same time wield the sceptre of classical lore, all the so-called “humanities”, all the natural sciences, and be a physician in active practice both general and special. But, as has been found in every department of human occupation, gradually, as the number of workers and the value of their achievements increased, division of labor had to be resorted to. To day a physician can no longer with a general family practice combine the performance of all the operations which constitute the different recognized specialties of Medicine, although every physician, both family practitioner and specialist must possess a general medical education embracing every part of the body alike. The accumulation of facts of pathology and therapeutics, especially the introduction of physical methods, instrumental appliances and surgical devices, for exploring and treating disease, requiring not only more precise knowledge but also greater manual dexterity, involved educational changes for the successful study of Medicine.

I am not about to describe to you the details of medical study in the past, nor shall I dwell upon the greater advantages enjoyed by all medical students of reputable colleges at present than any that I had in my student days, twenty-eight years ago, although I was a member of a class taught by the Faculty of Jefferson Medical College of Philadelphia, constituting, admittedly, at that time the best corps of teachers in this country.

The medical “apprentice”-ship of former days, when a man became a Doctor without going to any medical college, simply by being for a longer or shorter time with another Doctor, doing

perhaps as much menial as professional work, has been, and properly, abolished; but the practical good, in many ways, of having a "preceptor" ought to be retained. When I was a student, colleges had already commenced to be lax in this matter, and since then, the requirement of a regular preceptor has been still more often passed over.

We were not in the Jefferson College without clinical instruction, a useful method of practical instruction, to which still greater prominence has justly been given in all Colleges, since.* The only great difference between our curriculum then, and that of Dartmouth Medical College now, was that we had no *Recitation Term*. This is one of the distinguishing good features of Dartmouth, and I am sorry to say that but very few other medical Colleges as yet appreciate, or have followed, this innovation. Such good books have been written, and are being published every year, on every medical subject, that didactic lectures unillustrated with living patients or specimens or preparations, or not dealing with manual and instrumental methods of procedure,—should, in my opinion, give way to book lessons, except in special departments and for special purposes. All that most lectures can do is to awaken interest, to be suggestive, and to be explanatory of certain points; while, for general serious study, for all instruction except demonstrative, the carefully written systematic treatise, analyzed under the personal supervision of, and recited to, the teacher, is unquestionably preferable on account of its solid and well-considered information; and yields better results, both in disciplining the mind and in imparting usable knowledge. The *Recitation Term*, extending in this College over six months of each year, "in addi-

*And recently, there have been established in New York, Philadelphia, St. Louis, and perhaps in other cities, "with the special view of teaching only clinical medicine and surgery" Colleges for Practitioners. "It is now considered essential that every graduate should have the personal experience of a dispensary or hospital service, and that practitioners of fair experience, yet removed from the great centres where medical science is naturally more progressive, should at intervals avail themselves of the advantages which the city clinics offer for a more thorough training in general or special medicine. The Polyclinic will endeavor to meet the wants of this large and intelligent class."—*Annual Announcement of the New York Polyclinic, Session of 1883-4*, p. 6.

tion to book-lessons affords an excellent opportunity for the study of Anatomy with dissections, and Chemistry with work in the Laboratory, and is quite essential if the student would fully profit by the lectures."

I counsel you to come in and listen to every lecture delivered in the College, not to skip—as first-course students are generally advised to do—the more advanced and special branches. Take at first no notes, but intently and enquiringly listen to, and look at, the lecturer. Even though many things are said that you do not understand, and many more that you do not long remember, your ear and mind cannot help but become accustomed to technical terms and ideas; and memory will often during after-study recall and make clear knowledge that would otherwise be lost to you. If you are in a receptive condition, you will quickly realize the suggestive value of lectures.

Earnest and anxious experience and experiments have convinced me that to derive most advantage from a medical lecture, the student should read beforehand what is said in one or more text-books on the particular subject; then, listen in the manner I have before explained and make no written note except now and then of a striking and particular point; then, write out the lecture from memory, as best he may; then, compare his essay with what all his text-books say; and then,—and this is so important that it should never be omitted—ask questions of the lecturer concerning points of difficulty, or in case of disagreement of authorities. But, as you are going to have delivered to you from to-morrow morning on, six lectures a day, it will be impossible for you to proceed from the commencement with each lecture in this way. Some among you are no doubt able to accomplish more than others; each one of you, however, can follow the advice I am about to give. If you are at the very beginning of your medical study and have not had the advantage of the past recitation term with its dissecting and laboratory work, read up on and analyze, in the way I have recommended, Anatomy, Physiology and Chemistry only; otherwise, i. e. if you have been already "posted" on these three basic subjects of medicine, take up in this way the Science and Practice of Medicine, Therapeutics and Materia Medica, Surgery and Obstetrics. During the next year's course of lectures, do the same with Gynecology, Ophthalmology, Lar-

gynecology, Mental Diseases and Medical Jurisprudence ; and as, always, but a few of these subjects are taught on the same day, every one of you can master them by the proper amount of diligence. But, gentlemen, remember the warning example of the child who, surrounded by good things, picks up so many more than he has as yet learned to hold, that he drops the most important ; therefore, no matter how much you may be attracted by any of the specialties of medicine, do not, I beg of you, devote yourselves to their study, during the time of your pupilage, to the exclusion of the basic and general branches : Learn at the threshold, that the Special Departments to be successfully entered upon, must be erected as superstructures, always, upon the foundations of general Departments previously securely grounded, built upon and kept in good repair.

Speaking for my colleagues as for myself, I do not hesitate to state that each of your teachers is conscientiously and earnestly determined to furnish you sound and useful instruction. As to their ability, I need say nothing ; but I desire to declare that it is one of the proudest gratifications of my life to be associated with them.

My experience with former classes of Dartmouth has convinced me that its students come here as firmly resolved to acquire, as their teachers are to impart, information.

And we have the impartial assurance from the Delegates of the New Hampshire State Medical Society in the words of their last Report that they found "sufficient proof that it is not intended that graduating from Dartmouth Medical College, shall be simply a pleasant pastime, easily passed, and readily attained ; but a stern reality : to be successfully met only by *hard work, persistent effort, and unquestionable proof of fitness for the degree of Doctor of Medicine.*"

To this I add, that all that is exacted of you, gentlemen, you can accomplish by diligently following the course prescribed ; and once more I wish to encourage you, throughout the whole period of your student life, to ask questions of your teachers on all troublesome points.

Then, after you will have devoted three full years to your professional studies and fulfilled all the other collegiate require-

ments ; after we shall have proved you to be "good men and true" ; after you will have been tried by the final examination of the Faculty and the Delegates from the State Societies of New Hampshire and Vermont and *not found wanting* ; we shall send you forth, thoroughly equipped, trustworthy and skillful physicians !

Ladies and Gentlemen : To the true physician there is in his profession an inexpressible glory and sanctity ! In its exercise all his thoughts are purified ; and no base passion can find place in his heart. Theories and hobbies are put aside ; he appreciates the serious requirements of a positive science and responsible art. All mundane conditions merge their distinctions into one common presentment : human suffering appealing to human skill. As every part and every function of the body is strengthened by exercise, so his feelings of sympathy, piety and charity being oft excited are made more acute ; they are not dulled as people frequently suppose, but though acting prompted by his feelings, this outward manifestation is controlled by his medical judgment and nerve. He confronts the sick, a calm intelligence, unaffected by the appalling horrors and threatening dangers that sometimes surround disease. His decision as to the course to be pursued, medicinal or operative, is reached often promptly, always thoughtfully and solemnly ! The patient's life oft lies within the hollow of his hand, and there is nothing more divine on earth than his successes : human life saved and human suffering relieved by human skill !

